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JOURNAL OF
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EDITORIAL



You will remember the advice given in last month's Editorial regarding the responsibilities of members, wherein it was suggested that members should obtain additions to our ranks by approaching non-members and endeavouring to enrol them in the Wireless Institute of Australia. In order to assist you in bringing forward points for discussion in your approach to intending members we have pleasure in offering the following very interesting reasons why every licensed Amateur should be a member of our organisation:—

Technical Publications: The Institute publishes its official organ "Amateur Radio" as a means of disseminating technical information and club notes of particular interest to Amateurs.

QSL Card Distribution: This feature offers members a cheap, economical and efficient method of handling QSL cards.

Lectures: The provision of lecture rooms and meeting places makes it possible for lectures of special interest to Amateurs to be given.

Field Days: Our organisation caters for those Amateurs interested in portable equipment by arranging numerous field days.

Contests: Many Amateurs are interested in contests which could not be held without an organisation such as the Wireless Institute of Australia to handle the detailed work involved.

Library: Technical publications and in some cases, instruments are available on loan to members.

Divisional Broadcasts: Divisional broadcasts keep country members and others in touch with current happenings in Amateur Fraternity.

Advisory Committees: These committees provide effective liaison between officers of the P.M.G. Department and Amateurs who, without their friendly guidance would infringe the regulations.

P.M.G. Department Liaison: The voice of the Amateur is represented to the P.M.G. Department through the Federal Council and the Federal Executive, thus ensuring regulations of a generally satisfactory nature and protecting Amateurs' rights and privileges.

A.O.C.P. Classes: The Institute provides lecture rooms and lecturers to fit intending Amateurs for examinations.

I.A.R.U. Liaison: The Institute provides liaison with other Amateur bodies throughout the world through the Federal Executive and the I.A.R.U.

Slow Morse Transmissions: Special permission has been obtained from the P.M.G. Department to assist intending Amateurs by providing slow Morse transmissions.

Disposals Equipment: Organisation has been provided in various States for the collective purchase and distribution of disposals equipment.

Country Branches and Zones: The interests of Amateurs outside the metropolis is catered for by organisations within the Divisions to permit such members the opportunity to present their particular views on Amateur matters.

Affiliated Clubs: The Institute fosters and approves the affiliation with other Amateur Clubs.

We have no hesitation in saying that all of the above facilities could only be provided through an organisation such as that provided by the Wireless Institute of Australia. The democratic government of the Institute is assured through the controls exercised by the Divisions through the Federal Council and the Federal Executive who govern and defend the rights of both members and non-member Amateurs.

It is up to you to use this information in securing as many new members as possible for your Division.

FEDERAL EXECUTIVE.

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Homecrafts

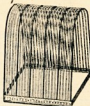
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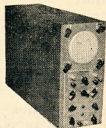


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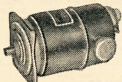
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A Double Conversion Superhet For 50 Mc.

BY F. J. STIRK,* VK2ABC

THE R.F. SECTION

HAVE you ever thought about building for yourself one of these "Double Conversion Superhets" that are so glibly mentioned over the air at various times? If you have, you immediately begin to worry about which frequencies to choose for the i.f. channels? What side of the i.f. channel shall the oscillator operate? How many "birdies" and how strong will they be in the band of operation? How can I eliminate them if necessary? If a xtal is unavailable for the second oscillator will an ordinary oscillator do? What will the frequency stability be like? Will 450 Kc. be satisfactory for the second channel or should I use 175 Kc.? What tubes ought I to use? And a hundred other questions which magnify the task to terrific proportions before you start.

When you commence to look for information on these receivers it's a little hard to find unless you have an extensive library and even if you can find some description of a receiver the details are perhaps just not quite what you want and you go ahead with certain doubts in your mind and this leads to a lot of time spent in experimentation and in some cases frustration.

The receiver about to be described is not classed as a "world beater," but it is a receiver with good sensitivity, signal-to-noise ratio, reasonable selectivity, a minimum of controls and reasonable adaptability, and more to the point, within the limits of home construction.

At this point someone may say, "why a receiver?" "Why not just a converter?" Well, it's a matter of opinion, deepness of pocket, operating intentions and convenience. So for those who have in mind building something for "six" to be used in the coming DX season, here it is. Tubes used were on hand and are considered satisfactory, although better tubes could be used with perhaps advantage in the r.f. section.

The 6AG5 r.f. amplifier is used as a pentode feeding a 6AG5 used as a triode mixer. The oscillator for the first mixer is a 955 which is reasonably stable and fairly plentiful, this operates on the low frequency side of the signal tuning from 47.9 Mc. to 51.9 Mc., the first intermediate frequency being 2,100 Kc., an easily attainable frequency. The i.f. amplifier used is a 6BA6, ideal for the purpose, and with a large amount of gain, the transconductance figure being 4,400 micromhos at 250 Ep.

The output of the first i.f. channel feeds into a 6J8G as a second mixer; a number of tubes were tried in this position and this gave the best conversion gain. The X61M, with a conversion transconductance of 750 approx. would possibly be better, but was unavailable for test. The demodulator chosen was a 6G8G, and the output tube the normal 6V6 without feed back or frills.

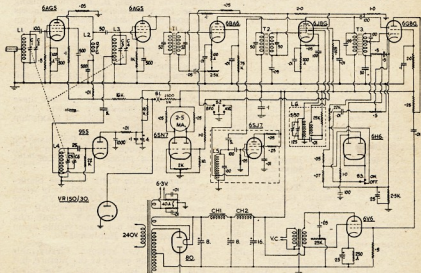
A noise limiter is almost always essential and for this purpose a 6H6 was

used in a fairly effective circuit before the grid of the 6G8G. This employs a circuit described in "W.W.," Dec., '46.

The b.f.o. is necessary of course for c.w. operation and hunting up weak signals. The 6SJ7 used here could be substituted with a 6J7 or equivalent, or almost any tube on hand.

"S" meters are fairly tricky things at the best of times and unless definite calibrations are obtained and held, the readings mean nothing except for a comparative basis and is an aid for tuning. However, it was decided to include one using a 2.5 Ma. movement converted 5 amp. r.f. thermo-couple meter. Plate current variations in the a.v.c. controlled tubes were insufficient except on strong signals to provide a reasonable deflection, so a linear type of arrangement employing a double triode 6SN7 was employed. This provides excellent readings and on strong signals a full scale deflection. The tube could be substituted with a 6A6 or equivalent if a 6SN7 is unavailable, or if a 1 Ma. meter is available it can be placed directly in the h.t. lead to the 6BA6 using a bridge circuit to balance out the standing current with excellent results and the exclusion of the extra valve. I, variations in the 6BA6 were approximately 0.7 Ma. for a solid signal.

Power for the receiver is obtained from a standard type power supply using an 80 or 5Y3GT rectifier and an 80 Ma. power transformer.



- L1-6 turns 18 g. enamel, $\frac{1}{4}$ " diam., $\frac{1}{2}$ " long, tapped $1\frac{1}{2}$ turns from earth end.
- L2-R.F. Choke, wound on a 1 Meg. 1 w. resistor, 32 g. enamel.
- L3, L4-6 turns 18 g. en. $\frac{1}{4}$ " diam., $\frac{1}{2}$ " long, tapped $1\frac{1}{2}$ turns earth end.
- L5-450 Kc. b.f.o. coil, tapped approx. third from earth end.
- L6-B.c. coil, reduce grid winding approx. 20%.

- C1, C3, C5—Two-plate isolantite ended tuning condensers (midjet type), ganged.
- C2, C4, C6—3-35 mica (ceramic) trimmer condensers.
- T1, T2—2.1 Mc. i.f. transformer (converted).
- T3—450 Kc. tapped i.f. transformer.
- CH1, CH2—15 H. 80 Ma. filter chokes.
- S1, S2, S3—Toggle switches.

* 60B Alma Road, Maroubra, Sydney.

TELEVISION MADE EASY

Part iii.—What's in a Television Signal?

BY JOHN JARMAN,* VK3ADA

So far we've learnt that at the transmitting end, the camera takes photos of the scene continuously, at the rate of 25 per sec., and that each of these photos is split into 625 horizontal lines, each of which is transmitted as a stream of electrical impulses.

We've also learnt that this picture signal is mixed with certain controlling signals, before being transmitted, so that the signal, which reaches our receiver is actually a composite signal, containing both picture and controlling components. We shall now treat this in greater detail.

Now the only controlling signals that we have dealt with so far have been the synchronising signals. In addition to these, however, there are important components called "blanking signals." What are they for? Let us review part of the first article of this series, where we learned that on the receiver screen, a moving spot of light starts at the top left hand corner, and traces out a zig-zag path, completing 625 parallel lines, as shown in Fig. 1.



Fig. 1.—Even Field.

Between these lines, the spot returns to the left hand side of the screen, as shown by lines BC, DE, in Fig. 1. These are called the "fly-back" or "retrace" periods, when the spot must not appear in the picture. How can we make this spot invisible between lines?

Well, we've already learnt that the brightness of the spot depends on the amplitude of the received signal. This is illustrated in Fig. 3. Take a look at it. Line AB represents the maximum amplitude of the signal. Now, since we are using negative modulation, the greater the amplitude, the darker will be the spot. Therefore, if the signal's amplitude be increased above a certain level, the spot will become invisible. This is called the "black level" of the transmitted signal, and in Australia, this level is to be 75% of the maximum signal amplitude, as shown by line CD.

Line EF in Fig. 3 shows the minimum signal amplitude, to be permitted in Australia, which is 10% of the full amplitude, and of course represents maximum brightness of the picture.

Therefore, when the amplitude falls to 10% of its maximum value, the moving spot on the receiver screen will be at its brightest; and when the amplitude reaches 75% of its maximum value, spot becomes invisible. Try and figure this out before reading any further.

By increasing the signal amplitude to 75% or over, therefore, we can make the spot invisible whenever we please, and this is the purpose of our blanking signals, which are simply broad pulses, whose amplitude is 75% as shown by XY and PQ in Fig. 3.

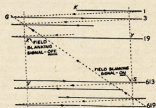


Fig. 2.—Odd Field.

Let us now study the movement of this spot more closely. Look at Fig. 1. Commencing at A, spot travels across to B, "painting" a line of the picture. When it reaches B, a synchronising pulse (in the received signal) causes the spot to be "jerked" back to C, from which it commences tracing out another line of the picture, CD, and so the process continues. When dealing with the receiver, later on, we shall learn how these synchronising pulses operate, but for the present, we are only concerned with their positions in the signal.

Now refer back to Fig. 3, where these synchronising pulses are shown. They are simply narrow pulses, of maximum signal amplitude.

Now we notice that the blanking signals are much broader than these synchronising pulses. Why? Look at Fig. 1 again.

Because of the width of these blanking signals, the spot is visible only when between the lines XV and YS. For example, while tracing the line AB, the spot is "blanked out" at Y. Continuing its journey, it is not made visible again till it reaches T. But why?

There are two reasons. Firstly, this "trims up" the edges of the picture, but this is just "by the way." The main function of the broad blanking signal is to separate the picture signal from the synchronising pulse, and thus prevent high amplitude picture impulses from upsetting the synchronisation. This is most important, as we shall learn later.

Remembering that in this article, we are studying the composition of the television signal, let's sum up what is found between the lines of the picture.

First of all a blanking signal is applied, just before the light spot on the receiver screen has finished its left-to-right journey. Next, a synchronising pulse, and finally, the blanking signal is removed. These three phases are shown in Fig. 3 by points X, T and Y respectively.

At the end of each picture, the spot is returned to the top of the screen, so that between pictures, as would be expected, there is another synchronising signal consisting of six broad pulses as shown in Fig. 4, and accompanied by a long blanking signal, to act as a "separator," but you ain't 'eard nothin' yet!

In our first article, we touched briefly on "interlaced scanning," explaining that each picture is transmitted in two stages, each consisting of 312½ lines, the first consisting of even numbered lines, and the second, the odd-numbered lines, as shown very briefly in Figs. 1 and 2. Now each of these half-pictures is called a "field," and the pair, forming a complete picture, a "frame." Remember these names, since we'll be using them quite a lot. Once again, let us study the movement of our spot, on the receiver screen, referring back to Fig. 1.

In the case of an "even field," the spot commences at point A, and traces out alternate lines 2, 4, 6, etc., until it is half-way along line 620 (point H). At this instant, the field synchronising pulse (called a "vertical synch. pulse") arrives, causing the spot to be quickly moved to point K, at top of screen. Briefly speaking, it takes a period equal to three lines for the spot to complete the journey from H to K. These will be lines 620, 622, and 624. Since there are only 625 lines in the picture, the next alternate lines after 624 will be number one of the next field.

Spot will therefore, on reaching point K, trace out the latter half of line 1, thus commencing an odd field, as shown in Fig. 2.



Fig. 3.

Continuing its journey, spot will now trace out lines 3, 5, 7, etc., until it has completed line 619. It will now be at point F in Fig. 2, when another vertical synchronising signal will cause it to be sent back to point G, to commence line 2 of the next even field. Lines 621, 623, and 625 will of course be "lost" during this latter part of the spot's journey, which occupies a 3-line interval.

We see now that interlaced scanning is achieved by using an odd number of lines per picture (625) and an even number of fields per second (50). This ensures that each alternate field will terminate half-way through a horizontal line, and consequently, that the following field will be started half way along a horizontal line, so that the lines of an odd field will fall between those of the

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even fields, which precede and follow it. Study Figs. 1 and 2 carefully if this is not clear.

Our receiver will have no trouble distinguishing an odd field from an even one, since at the end of an odd field (Fig. 4a) the vertical synchronising signal commences at the end of a line, whereas, at the end of an even field, it commences in the middle of a line. (Fig. 4a.)

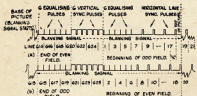


Fig. 4.—Signals Between Fields.

Now let us study the signals that appear in the transmission between fields. During an even field, the blanking signal is applied half way through line 614, and maintained until the middle of line 19 in the next field. This is, of course, to ensure that picture signals will be well separated from the vertical synchronising signal. Likewise, during an odd field, blanking signal is applied at the end of line 613, and retained till the end of line 18 of the next field.

This is shown quite clearly in Fig. 4, but oh my! What are all the other "turly-wurries" in this diagram for?

Well, it's like this. To keep a steady picture on the screen, the synchronisation of the horizontal deflection oscillator must be maintained throughout the interval between fields (and if you've forgotten what the horizontal deflection oscillator is for, just take a look back at article 1).

The synchronisation of this oscillator makes it necessary for the vertical synchronising signal to be of such a nature that besides "triggering" the vertical deflection oscillator (as we'll learn in more detail later) it must also keep the horizontal oscillator "in step". Vertical synchronising signal therefore consists of six broad pulses, and as we will learn, when dealing with the receiver synchronising circuit (which is a subject in itself), these broad pulses have the same ultimate result as the normal horizontal, or "line" synchronising pulses. The same applies to the equalising pulses, which precede and follow the vertical synchronising pulse. These have the same general shape as the line synchronising pulses, but are much narrower, and although at half-line intervals, keep the horizontal oscillator in step, without changing its frequency. Their function is something else that will be dealt with in a later

article, but for the present, it will suffice to say that they are there to help the synchronisation of the vertical oscillator perfect.

So, we have our vertical synchronising signal and its associated equalising pulses, but what about the horizontal line synchronising pulses that follow? These are to ensure that horizontal oscillator is in step, before the blanking signal is removed.

We've now dealt with the complete composite signal, which is handled by a television receiver. Still clear as mud? Then pour over Fig. 4 a little longer. Study it in conjunction with Figs. 1 and 2.

You will notice that the only lines that appear on the screen are those within the frame XYSV, in Figs. 1 and 2, but adjustments are made to ensure that these lines fill the receiver screen, and the camera target, so that no detail is lost.

To top off this article, let us talk about frequencies. In audio work, the modulating frequencies that we handle range from about 16 cycles/sec. to about 15 Kc.

Now in television, the carrier is modulated by frequencies ranging from 50 cycles/sec. (the field frequency) to over 5 Mc! I shall not waste valuable magazine space going through the arithmetic of working out this last figure, but a brief outline may help.

For mathematical purposes, each line of picture is assumed to consist of a row of squares. If the picture were square, there would be 625 per line. Picture is to have a height-length ratio (called the "aspect ratio"), however, of three-quarters, so that the number of squares per line will be $625 \times 4/3$. Each of these squares, called a "picture element" represents the smallest amount of picture detail that can be transmitted, and forms half a cycle of signal current. Now consider the number of lines per field, that carry picture detail, and the number of fields per second.

Without any further calculation, we can see that the answer has a high value, just over 5 Mc.

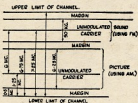


Fig. 5.—Signal Allocation on a Television Channel.

By means of a cunning system, involving the suppression of portion of one of the sidebands, the picture signal (Fig. 5) is "compressed" to fit into a bandwidth of 6.25 Mc., which is the maximum allowed.

The sound is transmitted on an adjacent channel, by a system called "Frequency Modulation" which will be explained in a later article. The total bandwidth allowed for the complete signal is 7.5 Mc., and the receiver is broadly tuned, to admit the whole lot, through the one input stage, the sound and picture signals being separated within the receiver.

ACCURATE FREQUENCY TRANSMISSIONS FROM VK3WI

The next Accurate Frequency Transmission will take place on Thursday evening, 22nd Nov., 1951, on the 7 Mc. band. Details of the operating procedure and times of operation will be found on page 5 of the February, 1951, issue of this magazine.

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A DOUBLE CONVERSION SUPERHET FOR 50 Mc.

(Continued from Page 3)

from 95° to 5° on an 0-100° dial if you take care with the coils.

The 2,100 Kc. i.f. transformers can be obtained from standard 1600 or 1500 Kc. transformers. These transformers, if of local manufacture, will be found to employ 100 pF. condensers as a rule, and honeycombe windings. With a little manipulation, remove the 100 pF. condensers and substitute 50 pF. condensers of a silver mica type preferably. Other types may cause the tuning to move, or even a reduction in gain due to loss of Q. When replacing the condensers, recover them with wax to be on the safe side.

SECOND OSCILLATOR

The oscillator section for the second mixer may consist of a suitable b.c. oscillator coil which normally tunes from approximately 1000 Kc. to 2000 Kc. Remove about 20 to 25% of the turns and retune to resonance at 1650 Kc., adding capacity to attain this. This gives a reasonably high C circuit and increases the stability. In the writer's case the capacity employed amounts to almost 175 pF., made up of 125 pF. lumped capacity and a 5-50 pF. good quality trimmer for adjustment. It was not found necessary to frequency control this arrangement with the use of temperature compensating condensers.

To reduce radiation of the fundamental and harmonics to a minimum, the plate voltage to the oscillator was fed via a 300,000 ohm resistor and it oscillated quite readily and supplied enough injection voltage at that reduced h.t. If possible, place all the tuning condensers, and as much of the leads as possible in the coil can and adjust the trimmer through the base or top of the can.

B.F.O. COIL

The b.f.o. coil can consist of a half section of an old 450 Kc. i.f. transformer or any suitable coil fitted into a can and reasonably shielded to prevent stray radiation. Tuning can be accomplished via the slug if employed, otherwise include a small trimmer condenser.

APPLYING THE H.T. SUPPLY

After you have decided on the layout, and mounted and wired the components, comes the moment when you switch on the power, and either switch it off again smartly at the appearance of a wisp of smoke, or proceed to make your electrical checks. A good practice is to connect a voltmeter across the h.t. supply and then switch on, observing the meter reading. This can prevent damage if mistakes in the wiring have been made.

When you have measured the h.t. and decided it is satisfactory, check the voltages on all the tubes and make any adjustments necessary. Before leaving the h.t. on too long, take a quick look at the "S" meter and if the needle is not laying at the bottom of the glass adjust the 2,000 ohm potentiometer for zero reading on the meter.

Switch the noise limiter and the b.f.o. to the "off" position and make any

checks necessary on the audio system. A quick flick on the grid of the demodulator will decide whether the audio system is working.

LINING UP THE STAGES

Temporarily short the a.v.c. circuit to ground via the 50,000 ohm resistor and connect a signal generator (if available) to the grid of the 6BAC via a 0.1 uF. condenser and adjust to 450 Kc. You will probably need the full output of the sig. gen. to produce a signal in the speaker for a start, but by adjusting the i.f. transformer, the input can be reduced. After the i.f. transformer is adjusted, switch off the modulation from the sig. gen., switch on the b.f.o., and adjust the frequency by means of the slug to give you the required beat note with the 450 Kc. signal.

With the b.f.o. switched off and the short still on the a.v.c. system, connect the sig. gen. to the grid of the 6BA6 i.f. amplifier. You may be able to hear a weak signal, and if so, roughly peak the 2100 Kc. i.f. transformer, reducing the input accordingly. If you cannot hear a signal, adjust the trimmer on the second mixer oscillator, commencing from the maximum setting, until a signal appears. Now tune the i.f. transformer for maximum response.

Remove the sig. gen. and connect to the grid of the 6AG5 mixer. Leaving the grid coil in position, and adjust the first i.f. transformer for maximum response. The sensitivity with both i.f. and audio volume controls fully advanced will now be in the vicinity of 50 uv. or so.

Now adjust the i.f. transformers commencing from the second 2100 Kc. transformer for maximum response. Check the setting of the trimmer on the second mixer as this may be slightly off resonance too. The overall sensitivity of the i.f. channel from the grid of the first mixer will now be in the order of 10 to 15 uv. which is a reasonable gain and there should be no evidence of instability. If there is, then look to the by-passing and placement of wiring.

If the sig. gen. will tune to 50 Mc., so much the better; if not, you will have to use a harmonic, second or third will do at a pinch. Remove the short on the a.v.c. line and connect the sig. gen. to the aerial terminal via a small condenser about 100 pF. or via the dummy aerial if available and tune the sig. gen. so that you introduce a 54 Mc. fundamental or harmonic into the receiver. Now adjust the oscillator trimmer condenser for a signal commencing from the maximum position. When you have decided which of the many signals you will hear is the correct one, quickly swing the mixer and r.f. trimmers to resonance and check that they will resonate.

This adjustment should be done with the tuning condenser near minimum position. To make sure you have the right peak on the oscillator, reduce the capacity of the oscillator trimmer until you hear the signal again at approximately the same strength, this is of course the h.f. peak, and retune to the original position that places the oscillator on the i.f. side of the signal, which is what we require.

Tuning the mixer and r.f. sections to resonance is now normal practice and need not be covered here. It is sufficient to say that by peaking the trimmers on the h.f. end of the band and squeezing or opening the coils to track at the i.f. end of the band, the amount of error in tracking when finally adjusted, is surprisingly small. Better adjustments can be obtained using iron slugs and suitable formers, but these are not always readily obtainable and present difficulties in construction.

You should, at this stage, be able to connect the antenna and get quite an amount of background hiss, if not receive signals. This depends of course on whether there are any signals on the air at the time.

Tune over the band, however, and check for any whistles or strange carriers. If the procedure has been followed using the frequencies suggested there will be no spuriously radiated signals heard from one end to the other. If any whistles are heard, check whether they are being radiated from the second oscillator by placing a screwdriver on the trimmer and noticing if the frequency shifts. If they are, careful manipulation of the second oscillator will move them one way or the other and then re-align the 450 Kc. channel to compensate for the new frequency of the oscillator. However, no signals were apparent for some distance on either side of the band in the model.

If no signal generator is available, it will be worth while making a small oscillator for the 450 Kc. frequency with a switched or plug-in coil unit for the 2100 Kc. signal or using one coil to cover the 450 Kc. channel and the harmonics to cover the 2100 Kc. channel is a possibility.

The frequency of 2100 Kc. ensures that the second spot or image of any signal in the 50-54 Mc. band falls outside the band, 450 Kc. band is chosen as the second channel frequency as this affords sufficient selectivity at 50 Mc. unless operating under difficult conditions. 175 Kc. or lower frequencies increase tuning difficulties and necessitate very good mechanical construction and regulation of the h.t. supplies.

Regulation of the h.t. was not found necessary, but was added, using a VR150/30 valve connected across the supply to the oscillator and first mixer.

Noise figures were taken on the receiver using a noise-made noise generator. The figures quoted do not necessarily mean that they are accurate, but serve as an indication. The best figure obtained was approximately 4 db, but as pointed out, this is only a reference figure. The main use of the noise generator is to adjust the aerial tap on the grid coil for best signal-to-noise ratio and for this purpose it is ideal.

It is realised that there are shortcomings in certain features of the design of the receiver, but it is a reasonable receiver, behaves well, is stable, and provides the writer with quite a few good contacts on "six."

It is worth mentioning that the best available components should be used for the r.f. end, mica filled valve sockets, good quality air trimmers, isolantite ended tuning condensers, reliable resistors and by-pass condensers, etc.

That's all chaps—be seeing you on "six".

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DX NOTES BY VK4OL*

Well, as far as I am concerned up here, September has been the worst DX conditions for maybe a long time. This is also the opinion of other hams here. The weather was not what we showed promise early in the month, but about the 9th, the bottom fell out of the 7 and 14 Mc. bands and the 30 Mc. band. The 30 Mc. band has bands in the mornings have produced practically a dead band, even the host of commercial stations. The 7 and 14 Mc. bands have no set pattern in the afternoons, signals from one area being there one day and nil the next. The 30 Mc. band has been very erratic, but on the 22nd for example, there were plenty of S. and C. Americans until about 0630 G.M.T., then the DX dried up. The 14 Mc. band had some Americans or Europeans talking there. Some colossal VK and ZL signals were heard once, twice, and the next night a dead band, practically.

The band survey of stations heard/worked from the gang is not very heartening, stations being listed which normally is chicken feed. All times are shown as G.M.T.

3.5 Me.: 7RK and my own visits produced very little except weak VK and ZL signals.

7 Me.: Noise level on this band has been quite high since the band collapsed, and with the few signals, it has not been much good for DX. Even though a few new contacts with Europeans have been very scarce. 4EL and I had a QSO one night and despite only 20 miles distance, Eric faded out. 7RK/7ZL are hearing a few Europeans in the afternoons, with an

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occasional N. and C. American at night. They list KL7FAD, XE1SA, G8CJ, GC4LI. 20W has found the band of little use, being unable to hear the W.A. broadcast. My own listing, VQ4AQ, ZS8QY, ZS3U, E4TEB at 0645 and KJ0N, CN8MZ, SU1FX, HH2LD, LU3EL, VS1DZ, K7JAP, K7SAA, ZC4DW. K76AA said he is in Trust territory, pre-war J9, and will let me know the score by letter. I wonder!

[illegible]

cans in the afternoons. SNS has been having beam trouble, but snagged HC8LA. 4EL has been having trouble, but snagged HC8LA. Not hearing one on some days. 50W has not found things to his liking either, but managed to work CT3AA, G1ETK, SP1FV, Z8J, HZ1AR, VP4LZ, TI2PZ, F18RO, KB6AQ, YV5AE. All these bringing in much closer to his goal of 600. 600 is his own home, but he has been on VQ0CB* YN1OC QO5LY at 0600, QO5RA at 0615, QO5IL at 0645, Z5SK at 0615, LA2B, Z8TC, VP4TR, VP4LZ, 3A2AD* (QSL via HB9 BUR), CN9R, XZ2EM*, F00XZ, M13SL, EA8AP* (213 Millits), F00XZ* ZC0R, AP2N* (1025), and 3G, 3G, 3G.

9XK, who is ex-3XK, has been doing OK at Samarra to the tune of C3MY*, XZ2EM*, VP6CS*, HSIUN*, CR7BC*, CR7CR*, CR7AU (CR7s round 0900), PJ5HM*, VP5FP*, ZS3K*, VR4AB*, VR1B*, HBLJJ/HE*, HC1FG*, VFJJC*, VQ8CB*, VP6LN*, VP6CDI*, YN1OC*, YV2EJ*, PZIAL*, OQ5LL*, VRIG*, VP7NM* and YV5EH*.

28 Mc.: This band has been of little use, but 4EL has found the band worth watching, hearing and working the Americas and Europe at times. 1BK reports the band of no use.

WGKIP said PXIAR was legitimate, but he closed down again before the end of the month. Also that EA0s AB, AC, and AD are fairly active on 14 Mc. I know AB does QSL as DX stations have his card. Alex said also that an SV9 is active on Crete, LB9AC at Svalbard and LB9CH Jan Mayen. Also mentioned VRTAA is reputed to be on Nauru, but little is known about him.

KM6AW/KS6 will be at Pago Pago for two years, but to date does not hear the many VKs that have called him.

The QSL situation shows some good ones which have turned up for the gang, to the tune of FR1AA, FG7XA, XU8F, VP4TB, Y13BZL, VP6SD, KV4AQ, KB6AQ, HSIUN, HC1ILM (in seven days), JA2AB, EA6AM, KC6WC, PK7AQ, now EK1AQ who had one of my cards close him for four years.

got and a new man, not RMR, YERS, but one of the other men, one in red, YK8, who is hearing YNIOC promise cards by mail, yet he and TLZ are still waiting after two years. 3KX is waiting on cards from KX6 and EK, even though he has worked a few of each. 2YC said cards are still not available from 1PG and 1YG. 2DG worked VRTAA and sent an air mail card to Nauru, the QTH given, and had it returned by the P.M. at Nauru as "unknown." Keith reckons the P.M. will be a bit busy on returning job as VRTAA is known to be fairly busy. Keith thought it would be a fair idea to advise there are about 13,624 stations in the

Some months ago, I mentioned the propaganda appearing on QSLs from OK. It seemed to have gone a stage further now, and it is now being broadcast from the station. I have got a bit terse with OKIVA. A listener's card from LZ1102 says stations should be operative from LZ1000 to LZ1100. Stations expected to be operative are LZ1000, LZ1001, LZ1002, LZ1003, LZ1004, LZ1005, LZ1006, LZ1007, LZ1008, LZ1009, LZ1010, LZ1011, LZ1012, LZ1013, LZ1014, LZ1015, LZ1016, LZ1017, LZ1018, LZ1019, LZ1020, LZ1021, LZ1022, LZ1023, LZ1024, LZ1025, LZ1026, LZ1027, LZ1028, LZ1029, LZ1030, LZ1031, LZ1032, LZ1033, LZ1034, LZ1035, LZ1036, LZ1037, LZ1038, LZ1039, LZ1040, LZ1041, LZ1042, LZ1043, LZ1044, LZ1045, LZ1046, LZ1047, LZ1048, LZ1049, LZ1050, LZ1051, LZ1052, LZ1053, LZ1054, LZ1055, LZ1056, LZ1057, LZ1058, LZ1059, LZ1060, LZ1061, LZ1062, LZ1063, LZ1064, LZ1065, LZ1066, LZ1067, LZ1068, LZ1069, LZ1070, LZ1071, LZ1072, LZ1073, LZ1074, LZ1075, LZ1076, LZ1077, LZ1078, LZ1079, LZ1080, LZ1081, LZ1082, LZ1083, LZ1084, LZ1085, LZ1086, LZ1087, LZ1088, LZ1089, LZ1090, LZ1091, LZ1092, LZ1093, LZ1094, LZ1095, LZ1096, LZ1097, LZ1098, LZ1099, LZ1100, LZ1101, LZ1102, LZ1103, LZ1104, LZ1105, LZ1106, LZ1107, LZ1108, LZ1109, LZ1110, LZ1111, LZ1112, LZ1113, LZ1114, LZ1115, LZ1116, LZ1117, LZ1118, LZ1119, 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LZ1620, LZ1621, LZ1622, LZ1623, LZ1624, LZ1625, LZ1626, LZ1627, LZ1628, LZ1629, LZ1630, LZ1631, LZ1632, LZ1633, LZ1634, LZ1635, LZ1636, LZ1637, LZ1638, LZ1639, LZ1640, LZ1641, LZ1642, LZ1643, LZ1644, LZ1645, LZ1646, LZ1647, LZ1648, LZ1649, LZ1650, LZ1651, LZ1652, LZ1653, LZ1654, LZ1655, LZ1656, LZ1657, LZ1658, LZ1659, LZ1660, LZ1661, LZ1662, LZ1663, LZ1664, LZ1665, LZ1666, LZ1667, LZ1668,

one that was operating a few months ago. When querying the non-receipt of his QSL, he said the previous CR4AH was now in Portugal. Stations signing JB prefix are now on the band, but the contact I had faded out after I heard him mention Japan, so have no further details on this one.

One never knows where the W.I.A. mag. is read these days, and the XYL reckons I'll probably be up for libel from a DX station. This month I received a copy of the "DX'er" the monthly publication of the Northern California DX Club who had read a couple of issues of the mag. Some interesting gen was gleaned from this copy, one item especially, is that if W stations are caught by the F.C.C. working stations in PK, FI, EP, EQ, AR, PJ, HS, J and OE except Allied occupation forces, they are in for a "bluev."

Alan 3CX is after the C.Z.A.R.A. award which is given for 25 KZ stations worked. Hasve to go. 2DG said if Alan works 250 KZ stations, he is due for a "Native Blonde with a bunch of bananas." Even the bananas would have a market these days. Alan also now has his cards for W.A.P. In case some of you have not seen the working on the KZ award, it's not as hard as it reads: "to ye who believe, these presents, know ye that the operator of Radio Station _____ being of sound mind

and body, did of his volition, without any use of radio parts, pecuniary compensation, or other forms of coercion, make contact with at least one of the KZS species, without apparent damage to his antenna, receiving equipment or auditory perception nerves. In recognition of this brilliant and daring achievement, said operator is hereby presented with this certificate, in token of which he depicts some of the operating hazards encountered in the Canal Zone. On this sign of the "Blonde hazard" thou.

QSLs for the month here are: XU6F, C8AAH, VP6CDI, C02PD, C07AH, SP1JF, SP1SJ, CR9AF, KV4AA, LA8U. 7RK had one from 884AX and BERS195: XU6F, PK5AA, KC8WC, KC6WD, 884AR, CR9AF, ZSTD, VQ8AB, OQ5DZ, and SVIEC (for 1945 report) bringing his total confirmed to 198.

One card I received from C7CW reads: "Found out by the police, non-licensed station, C7CW is out of the air from 3/3/51. I hope see you again when Japanese given with formal licence." So you see all C prefixes are not necessarily China. 20W is wondering when some of his cards are going to turn up. Patience Gordon is all you need.

My thanks to all those who once again gave me their assistance, which brings me to the thought for the month which is—

● "Before you give a phone station his report, put the b.f.o. on, if one graces your Rx. You'll be surprised just what it brings to light at times."

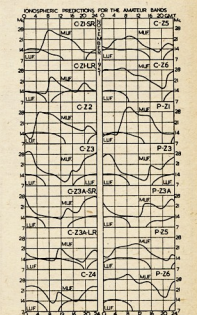
DX C.C. LISTING

PHONE					
Call	No.	Ctr.	Call	No.	Ctr.
VK3EE	10	152	VK3AWW	21	112
VK3JD	1	155	VK4PJ	21	109
VK6RU	2	148	VK4D	17	104
VK4HR	12	146	VK4DJO	20	104
VK6KW	4	145	VK2ADT	13	102
VK3BZ	3	141	VK2AHA	15	102
VK4KS	9	135	VK4WF	16	101
VK3LN	11	132	VK6PJ	19	101
VK3V	6	128	VK3GG	15	100
VK3JE	7	123	VK3JG	5	100
VK4VP	8	114			

C.W.			
Call	No. Ctr.	Call	No. Ctr.
VK3BE	6 183	VK3KE	3 122
VK4EL	9 183	VK5FH	31 119
VK4H	2 183	VK5L	31 119
VK2EO	2 152	VK3UM	12 116
VK3CN	1 151	VK3CK	30 114
VK4HR	8 150	VK4DL	7 113
VK6SA	2 150	VK7LZ	17 112
VK3VW	4 143	VK7A	17 112
VK2QL	5 141	VK4OL	36 110
VK3XB	10 136	VK4HC	13 107
VK4QU	10 136	VK4DU	13 107
VK2GW	16 132	VK2YC	34 103
VK5RX	23 132	VK3HT	37 103
VK3CK	26 132	VK3AP	14 101
VK4PI	26 132	VK3NC	14 101
VK5BO	33 129	VK2OA	32 101
VK4RF	11 125	VK7KR	25 100
VK4DO	20 124	VK7LJ	22 100
VK7LZ	31 124	VK7LZ	35 100

OPEN				
Call	No.	Ctr.	Call	No. Ctr.
VK3JB	4	202	VK3JA	43 114
VK3HR	7	188	VK2ADT	44 113
VK3IU	1	145	VK3VQ	45 112
VK3JE	12	180	VK3JP	47 111
VK3JG	3	171	VK4RC	21 110
VK2DI	1	170	VK3ZB	34 110
VK3CK	1	167	VK4WF	20 109
VK6KW	13	165	VK2ZC	25 108
VK4EL	10	163	VK2VL	11 106
VK3FJ	22	155	VK3AM	18 105
VK4RS	24	149	VK3VN	18 104
VK3FL	26	143	VK6UJ	27 104
VK3MG	1	141	VK4UZ	44 104
VK3OP	19	137	VK7KB	30 103
VK6DD	12	136	VK2TI	37 103
V9SLN	29	135	VK3BO	36 103
VK2ADE	28	133	VK6DX	42 103
VK2AHA	9	128	VK7RK	31 102
VK3AHM	40	125	VK4TY	35 102
V9SBN	31	124	VK6GJ	37 102
VK3RT	40	123	VK2ACX	6 100
VK3JI	33	119	VK2TG	39 100
VK7LZ	23	116	VK3MM	49 111
VK3LFW				

PREDICTION CHART FOR NOV., 1951



FIFTY CYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

NEW SOUTH WALES

The September meeting of the V.H.F. Section was devoted to film. Philips Electrical Industries supplied a film dealing with the Electron Microscope which proved extremely interesting. Horrie Jones, the local Urrug Club member, added to the evening's entertainment and a short film taken by John 2AMV was shown—the latter dealing with the last Urrug Club meeting.

The main item covered in general business was the proposal to set aside a small section of the 144 Mc. band for use by country stations attempting to work into the city. After considerable discussion a vote was taken which resulted in the motion being passed with a very large majority.

The frequency zone—144.0 to 144.1 Mc.—is set aside, by gentlemen's agreement, for the use of country stations wishing to test their gear in the metropolitan area. Stations within the metropolitan area are requested not to use the above mentioned frequency zone, keeping it clear of interference to allow the very much weaker country signals to be heard.

Country stations not having crystals which will multiply into this zone should make use of the crystal multipliers as mentioned in the last month's "Amateur Radio" as quite a number of the city boys have crystals falling within this zone.

One point of importance regarding the zone is that it should be used by stations using crystal multipliers. Stations using a crystal would take up the whole zone all on its own!

50 Mc. News: With the warmer weather approaching quite a number of stations have left their rigs in the city to try out their gear ready for the DX season. In the hope that someone may be listening from far afield, 2QZ is running regular night transmissions on 50 Mc. The time is 1930 to 2000 E.A.S.T., the transmissions being on m.c.w.

2AZ has re-appeared on the band after having been silent like two years. Les is now located near Liverpool and still very keen about v.h.f. work. At the moment is using a 40 mx Zepp! The more country stations have been coming through well and making contact with city stations. 2ADT, 2VU and 2ADS have been heard in Sydney. It is likely that the increase in the weather becomes warmer and temperature inversions more frequent, so far nothing has been heard of 2GU, Ceberra, or station further north, but with the increase in activity in country districts, the summer months may see some new contacts made.

144 Mc. News: 144 Mc. has been the centre of v.h.f. activity. The contest to decide the winner of the Bardin Trophy for mobile work was held on 20th September, and quite a number of stations took the field. 2AMV made the journey from Forbes to the Blue Mountains area to take part in the contest and John provided the sight of the year with a very substantially made three over three beam mounted on the back of his Holden.

2HL has once again been travelling, taking a trip to Mt. Lamble for the holiday week-end. With transmitting equipment for 144 Mc. and 580 Mc. and receiving gear from 3.5 Mc. upwards, they had a pretty busy time.

It is pleasing to note the interest in 144 Mc. being shown by the boys in the city. With the intense activity there should be large quantities of 144 Mc. r.f. burning up the atmosphere by summer. Out west the boys too, 2AMV and 2WH, ably assisted by 2BT at Eugowra have been establishing what amounts to a private "telephone" link via 144 Mc. 2TW at Orange has been experimenting with pulsed microphones and a 12 element beam and succeeded in contacting Forbes. 27F Young has been in regular contact with 2WH over a distance of 70 miles. This, mark you, with

27A using a folded dipole about the same height as the guttering on his house and 2WH with an A.S.V. Rx! These results point to the excellent possibilities of v.h.f. work in the country districts where plains are the main feature of the landscape.

A new station on 144 Mc. in the city area is 20K, ex-JASAI. John has started the right way with an active crystal controlled converter and a crystal controlled Tx and is putting out a very fine signal. 2AQX is also reported as being active with crystal controlled gear. In the North Coast districts, 2AHH and 2PA are working 144 Mc. between Port Macquarie and Newcastle, and 2XQ operates from 144 Mc. gear going this month. 2AEY, Taree, has started up on the band with a mod. osc. using 7193 and was last heard trying to make contact with 2ADT at Cessnock. 2HL has been the only station active on 144 Mc. in the Gosford area and has been running regular checks with 2ANP during the lunch hour. 2RU has finished his 829 Tx but so far has not made it talk.

576 Mc. This band was fairly lively last month. Early in the month a number of ASB and 2Hs had the disposals market and were quickly snapped up by the 576 Mc. enthusiasts. These Rx's, suitably modified, have been giving out a very interesting new light, rather reminiscent of the ASV/AD days on 144 Mc. The only snag about the ASB7 Rx's is the current shortage of lighthouse tubes. However, even with the 2Hs, the ASB7 performs much better than even the best super regen Rx and of course with the 2Hs the gain and stage represents something really worthwhile.

The near war on polarisation has been amicably settled (we hope!) and by mutual agreement vertical polarisation is to be used, along with a few helical antennae which give circular polarisation. 2HL/portable at Mt. Lamble tried hard to establish contact with 2H on 576 Mc. but without success. They did however receive very weak signals from 2XX at Sutherland under a long and not particularly good path.

VICTORIAN V.H.F. GROUP

Dates to remember: Nov. 21, Group Meeting at the Rooms, 2000 hours; Nov. 11, V.H.F. Field Day, 1200 hours; Nov. 12, 2Hs and 76 Mc. Lecture or other arrangements for the November meeting will be notified over 3WI broadcasts.

The November meeting was well attended and the 376 Mc. gear created a great amount of interest. Contact with 3QO was established and signals from 2H and 76 Mc. were received. The Tx used p.p. RL18; the antenna, eight half-waves all fed and a wire mesh plane reflector, was merely placed at an angle to the window; the Rx, a 955 super regen. The Group desires to express its thanks to 3AUX, whose efforts made the demonstration possible, and to extend congratulations to Geoff on the arrival of a junior op.

The matter of field days provided considerable discussion and it was decided to hold six during the coming months. Commencing in October, these are to be held on the Sunday following the 1st of the month, except January, except January, up to April, 1962. It was decided to hold a contest in conjunction with the 1st of the month, and the club chairman to draw up a set of rules to be presented to the October meeting for approval.

Perfect weather prevailed for the opening of the month and the 2Hs, 376 Mc. and 76 Mc. were 3HK, Mt. Dandenong; 3FO, Arthur's Seat; 3ACH, Mt. Bullengarook; 3AJI, Pretty Sally; 3ATM, Mt. Macedon; 36J, Mt. St. Helens. Both 50 and 144 Mc. bands were used, but no information is available about 288 and 376 Mc. activity, if any.

3U, Mt. Major, midway between Shepparton and Benalla in Northern Victoria, used both 50 and 144 Mc. and was much sought after. He worked 3ABA, 3PC and 3JH, all near 3U (150 miles) and 3KFL at Kinglake his signals were 84, but the 955 mod. osc. wasn't equal to the 80 tube job. The 60 Mc. band was used. 3U, however, was made with ease, signals being 3H. Several stations using the "community crystal" frequency on 144 Mc. caused 3U while he was on the air, but all remained vacant throughout the band.

SOUTH AUSTRALIA

Main interest is in the V.H.F. Contest, the rules for which are as follows:—

VKS Intra-State V.H.F. Contest Rules.

60 Mc. And Above

Periods:—Each Sunday evening, 1900-2200 local time commencing Sunday, 6th January, and ending 31st March.

Transmitting Section Scoring.—One point for each station contacted, plus one point for each twenty miles of the contact. Total of above points to be multiplied by number of individual stations contacted during period.

Receiving Section Scoring.—One point for each station logged plus one point for each twenty miles between receiver and transmitting station. To be eligible for an award, a receiving station must forward during the Contest at least one report of a transmitting station.

Correspondent VK5KL. These reports will be acknowledged by VK5WV on Sunday mornings. Total scores will be multiplied by number of activity reports received. Activity reports should contain in the first instance details of receiving equipment and must reach VK5KL by the first of the month following the contest.

Transmitting Logs are to show: Date, time, station worked, RST/NR, received, RST/NR, sent, frequency, mode, station worked, call sign, figure number, phone stations five-figure number. Number to commence at 001.

Receiving Logs to show: Date, time, call sign of station logged, points claimed. All logs must be received by 1st May, 1962. They are to be addressed to Box 1284K, G.P.O., Adelaide, and endorsed V.H.F. Details of awards to be announced later.

Lack of reports from the 288 Mc. gang does not mean lack of activity I understand, but some of the boys are a bit shy about stating the knowledge that SLO has been posted from Mallala to Ballarat and so the 288 Mc. DX has ceased.

50 Mc. activity has flared up again in Darwin and this time the challenge has been taken up by SR operating on 50.8 Mc. and is calling 2H and 76 Mc. stations. 2Hs are active for five minutes and then listening. Will this DX season see us break through to Darwin, at least we hope.

2DQ Dud Nourse is reported active on 50 and listed each Tuesday and Thursday at 1900 and 2100 hours. He has been active on 144 and 288 Mc. this summer, looking for duct break through to the Eastern States.

NEW PUBLICATION OF INTEREST

Mr. Lay W. Granch (VK5XC), Managing Editor of "Australian Radio & Electronics," addressed the 12th section of the journal is now devoted entirely to Amateur Radio, covering constructional articles on Ham gear and equipment on the bands and notes from around the shack.

In the August issue of "A.R. & E." is an interesting article "Input to the Folded Dipole" with an impedance step-up circuit to take care of calculating the input.

We are also advised that "A.R. & E." are commencing a new program, "Shortcuts" which will embrace receivers, transmitters, and the problem of ancillary equipment, such as absorption frequency meters, modulation monitors and other invaluable pieces of test equipment that enable one to work in the v.h.f. bands with so much more sureness, speed, and satisfaction.

Mr. Granch stated: "That the main idea behind this new publication is to give the Ham who feels that with a little help in the way of suitable published articles, they could make a star in this intriguing territory."

"We hope," he said, "that these articles will be of some value to those who have been put off by the difficulties, imagined or real, of v.h.f. gear, so that they feel that the Ham can build his own good transmitting program, and so v.h.f. as he does for the lower frequencies, and what is more important, that the one is no more difficult than the other."

Readers who expect to be taking an interest in the "A.R. & E." v.h.f. programme are invited to send their suggestions for any v.h.f. equipment they would like to see interpreted in these articles. The address to which they should be forwarded is "Aust. Radio & Electronics," 17 Bond Street, Sydney, N.S.W.

CRYSTAL SWAP

We have received several requests from readers to commence a section listing Crystals available for exchange.

This service will be entirely free and all that is necessary is to forward details of the Crystal to the Editor "A.R. & E." Crystals will be listed ONCE ONLY.

50 Mc. W.A.S.

Call	Crystals	Additional	Number	Countries
VK2WJ	13	3	
VK4RV	2	2	
VK4VY	1	1	
VK5LS	1	1	
VK5DW	3	3	
VK4HR	4	1	
VK4VY	4	1	
VK3RR	6	1	
VK3HT	7	1	
VK3HT	7	1	
VK3XA	11	1	
VK3GM	12	1	
VK3AB	13	1	
VK3ABC	8	1	

good fone starts at the mike!

CHOOSE YOURS FROM THE NEW ZEPHYR RANGE

Zephyr, Australia's leading engineers specialising in the manufacture of microphones, offer a complete range of precision built units, from the small crystal type to high fidelity velocity microphones for orchestral and studio work.

Robustly built and attractively finished, Zephyr microphones incorporate the latest advances in radio construction, ensuring good frequency response, high output and fidelity.

ZEPHYR "50" SERIES: Australia's highest grade, high-performance velocity microphones. Used in many leading Broadcast Stations, Recording Studios, Parliament House Canberra, U.N.E.S.C.O., etc., etc. An excellent example of first rate workmanship and rugged construction, giving a full frequency range response of 30 to 16,000 c.p.s. Finished in chrome and baked black enamel. The "50" series is ideal for P.A. work, theatres, dance bands and magnetic recordings. Output impedances range from grid to 50 ohms. (Illustrated "D" is 50 R.C.)

ZEPHYR "60" SERIES represents a general purpose range of high grade, low cost dynamic microphones, eminently suitable for Communications, Paging Systems, P.A. Systems, and Home Recording work. Frequency response is from 70 to 7,000 c.p.s. Available with handle and mounting base. (Illustrated "A" is 60 M.D.)

ZEPHYR "XA" CRYSTAL SERIES is made for magnetic wire and tape recordings in addition to general purpose communications work. Low cost and rugged construction make this series the most popular Amateur Microphone on the market today.

"4XA" is a hand type mike that may also be screwed into a desk stand or dropped into a receptacle for office desks, etc. (Illustrated at "C" and "E").

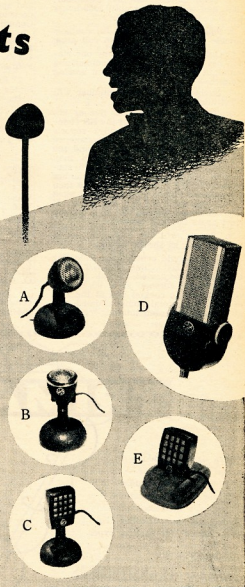
"5XA" is designed for omni directional pickup, and is perfect for conference recordings. (Illustrated at "B").

Especially Designed for the Amateur . . .

"4XA" is a crystal favourite, "60MD" is a 50 ohm output communications dynamic microphone.

NOTE.—Zephyr velocity microphones in particular are recommended equipment for use with PYROX magnetic systems.

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C 520

Ross A. Hull Memorial V.H.F. Contest

RULES

1. The Contest will take place in the 50-54 Mc. band and will commence at 0001 hours E.A.S.T. on 15th December, 1951, and will continue until 2359 hours E.A.S.T. 6th January, 1952.

2. Points may be claimed for contacts outside the competitor's own call area.

3. Only one contact with any one station per twenty-four hours commencing midnight E.A.S.T. to count as a scoring contact.

4. Exchange of a serial number will constitute a contact.

5. The serial number of five or six figures will be made up of the RS (telephony) or RST (telegraphy) reports plus three figures which may commence with any number between 001 and 100 for the first contact and which may increase in value by one for each successive contact, e.g., if the number chosen for the first contact is 050 then the number for the second contact must be 051, for the third 052, and so on. If any contestant reaches 999, then he will start again 001 and continue.

6. Scores will be calculated on a point's basis, as shown below.

7. Logs should contain the following information: Date, time (E.A.S.T.), call of station contacted, serial number sent, serial number received, points claimed for the contact and at the foot of each page, total points claimed and at the end the grand total.

Logs should be signed by the competitor together with a declaration to the effect that the station was operated strictly in accordance with the Rules and spirit of the Contest and that the decision of the Jubilee Federal Contest Committee shall be final and binding.

Logs must be received by the Jubilee Federal Contest Committee, Box 1734 G.P.O. Sydney, not later than the 27th February, 1952.

8. Entries will be accepted from all States of the Commonwealth and Districts of New Zealand. Check Logs from other Countries will be appreciated by the Contest Committee.

9. For the purposes of scoring, Northern Territory will count as a separate

Call Area. Also, VK9 will be considered as a State of the Commonwealth.

10. The decision of the Jubilee Federal Contest Committee will be final and binding upon all matters pertaining to this Contest.

11. The regulations governing the control of Amateur Radio in each contestant's country must be observed.

12. **Awards.** The outright winner of the Contest within the Commonwealth of Australia will hold the Ross A. Hull Memorial Trophy for one year and will, in addition, receive an appropriately inscribed certificate.

The highest scorer in each Call Area in Australia and New Zealand will be awarded a certificate. In addition the Jubilee Federal Contest Committee will have the right to make any other additional awards as entries or any other individual performance may warrant.

[illegible]

To obtain points per contact, look down the column of your call area until you come to the line of the State contacted. The figure where the two lines intersect is the point score for that contact. For example, VK5 works VK4, the points are 5.

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			Badie, Rice & Wholesalers Ltd.	Carlyle & Company Ltd.

FEDERAL, QSL, and DIVISIONAL NOTES



Federal President: G. GLOVER (VK3AG); Federal Secretary: G. M. HULL (VK3ZG); Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

President: John Moyle, VK3JU.
Secretary: David H. Duff (VK2EO), Box 1734 G.P.O., Sydney.
Meeting Night: Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor: Don B. Knock, VK2NO, 43 Yank Avenue, Waverley, Sydney.
Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHU, Ryan Ave., West Kempsey; Newcastle: Ron McD. Stuart, VK2ASU, 48 Dunbar St., Stockton; Central and Lakes: Harry Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Silt, VK2WH, Cambiamba, Forbes; South Coast and Southern: Roy Raynor VK2DO, 42 Pettit St., Yass; Eastern Suburbs: Don Knock, VK2NO, 42 Yank Ave., Waverley; Northern Suburbs: Harry Powell, VK2AYP, Russell Ave., Wahroonga; St. George: Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah Bay.

VICTORIA

President: G. S. C. Semmens, VK3GS.
Assistant Secretary: C. Gibson (VK3FO).
Administrative Secretary: Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne.
Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.
Zone Correspondents: Western: C. C. Waring, VK3YV, 12 St. Albans Rd., St. Albans; Central: K. O'Rourke, VK3AKR, Killgrew, Westmore; North Eastern: T. K. Tennant, c/o. Victory Cinema, 100 St. Mary's, St. Albans; South: VK3GZ, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Timbarra; North Western: C. Case, VK3ACE, Cumming Ave., Birchb.

FEDERAL

RUSSIA BANS 60,000 RADIO HAMS (EXCEPT THREE)

The following report comes from an English newspaper and is printed herewith for the interest of Australian Amateurs.
The Russian Government has banned all but three of the Soviet's 60,000 Hams—Amateur Radio Operators—from transmitting to foreign countries. And the three who are to be allowed the freedom of the air are highly suspect in Britain.

No reason for the ban has been given, but it is understood that it was imposed after a series of "illegal" transmissions in code had been picked up by the Russian monitoring stations.
"The three who can still be heard—all in the 20 metre band—are UP5A, of Kaunas, Lithuania; and FOA, of Moscow, operated by a hand well known to Hams in this country (England); and UMEKAA, a new station in the Central Asia Kirghiz Republic."
"Last night the Soviet Embassy in London refused to explain the ban. An official said that he doubted whether any Russian Amateurs, other than the three, would be heard calling this country."

"For most of the 60,000 Russian Hams the air was only link with Western civilisation. Most of them observed strictly the rule laid down by international agreement that only technical data should be discussed on the air."
"An official of the London bureau which checks Ham contact claims, said yesterday that 30,000 of 60,000 Russian cards confirming contacts with English stations were received each six weeks."

"For twelve months the Russian Government has been operating a station which sends out code messages in the 20 metre band—that most used by the Russian Hams."

"It has also had a 'jammer' idling in that band to block out transmissions from the Soviet Union."

Russian call signs are not included in the Radio Amateur Call Book Magazine and it is doubtful whether there are as many as the above report would have readers believe. Like other countries, Australia receives hundreds and hundreds of Russian cards, a great number of which are from "listeners" confirming contacts with English stations with Australian Amateurs.

Go TO USE PULSE

Amateurs in the United Kingdom will soon be permitted to use pulse amplitude and pulse width modulation on any fundamental frequency within the bands 2350-2400 Mc., 5700-

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK3WI: Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK3WI. Intra-State working frequency, 7175 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneous on 3590 and 144 Mc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks at Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneous on 3750 Kc., 7188 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the time are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI: Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5WI by arrangement only on the 7 and 14 Mc. bands.

VK6WI: Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7196 Kc. and 146.5 Mc. No frequency checks are available.

SILENT KEY

It is with deep regret that we record the passing of:—
VK3DY—Dick Dyer, Sec. Vic. Div.
W.L.A., 13th October, 1951.
VK2HI—Perc. Feeny.
VK4KH—Bill Argart.

3600 Mc. and 10,050-10,450 Mc. leaving 50 Mc. guard bands at each end. The power limit is to be 25 watts mean D.C. input and 2.5 kw. peak R.F. power.

Frequency modulation is now permitted on the band 144.5-145.5 Mc.

WORD FROM VK3UM

Hey chaps, we have received a few words from Bill Mitchell, VK3UM (late Federal Secretary), in England! We were just wondering whether Bill was ever going to demonstrate to others that he had put to use the Parker fountain pen with which he was presented before leaving his native land to take up military duties in England for an undictated (?) period.

He sends his very best 73 to all in VK land and to quote his own words, "Well 'em I miss their darned hides, curse 'em." And if someone doesn't keep Bill's files of "A.R." complete and in an unimpaired condition they can look out for trouble on his return! Hi!

A PARTING THOUGHT

Now is it on? Or is it off? . . .
I can't remember which.
I think it's off! His lombosene says
"He should have used the switch."
(Reprint from Radio ZS—South Africa.)

W.L.A. ACTIVITIES CALENDAR

- Dec. 1-2: Fifth All-European DX Contest, C.W. Section.
- Dec. 5-8: Fifth All-European DX Contest, Phone Section.
- Dec. 10-Jan. 8: Ross A. Hall Memorial V.I.F. Contest.

QUEENSLAND

President: J. H. Farrell, VK4WJ.
Secretary: J. F. Pickles, VK4FF, Box 633J, G.P.O., Brisbane.
Meeting Night: Third Friday of each month at the I.R.E. Rooms, Wickham St., Valley.
Divisional Sub-Editor: Clive J. Cooke, VK4CC, Kuran Street, Chermside, Brisbane.

SOUTH AUSTRALIA

President: E. A. Barbier, VK3MD.
Secretary: G. M. Bowen, VK3KU, Box 133AK, G.P.O., Adelaide.
Meeting Night: Second Tuesday of each month at 17 Wymouth St., Adelaide.
Divisional Sub-Editor: W. W. Parsons, VK5FS, 10 Victoria Avenue, Rose Park.

WESTERN AUSTRALIA

President: J. Campbell-Watson, VK3JW.
Secretary: H. B. Lang, Box N1002, G.P.O., Perth, W.A.
Meeting Place: Perth Technical College Annex, Mounts Bay Road, Perth.
Meeting Night: Second Monday of each month.

TASMANIA

President: R. O'May, VK7OM.
Secretary: L. W. Edwards, VK7LE, Box 371B, G.P.O., Hobart.
Meeting Night: First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart, Tasmania, until December, 1951.
Divisional Sub-Editor: S. Excell, VK7SJ, 77 Mole St., Hobart, Tasmania.
North West Correspondent: C. A. Cullinan, VK7XW, 12 Montrose Place, Launceston.

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

The S.A.A. advises that a pirate using the call signs SM5BR and SM5BR is active on the 7 and 14 Mc. bands announcing his QTH as Hallberg. His real QTH is believed to be in Central Europe. The only licensed Swedish call sign ending in BR is SM5BR.

QSLs for Malaya (VS1 and VS2) should be sent to VS2BA, Mr. E. G. Sugars, Dept. of Telecons, Muar, Johore, Malaya, until December, 1951. After that date cards should be sent to Mr. C. E. Salton, Postal Services Dept., Malaya. It should be noted that the latter address is as yet incomplete, but the full QTH of Mr. Salton will be advised at a later date.

A copy of "Amateurs Q Code," by VS2AA has been received from that station. A cursory glance at the "new" Q Code fails to reveal anything which suggests a departure from that at present in use. However, a closer comparison will be made during the month.

Arch Barrie, VK3GB (ex-ZL10H and ZL1GS) of O.T.C., Rabaul, T.N.G., has at last received sufficient cards to make a start with his backlog of QSLs. He is offering to supply for a supply to arrive from the "south," arranged for an interim supply to be printed at the Manuscript Centre in Rabaul. The measure up to the recognised commercial standard.

Copies of the rules of the forthcoming Fifth All-European DX Contest, to be staged this year by the R.S.G.B. as part of the Festival Year of Great Britain, set down this event for early December. There are two week-ends each 48 hours long, one for the phone and one for the c.w. section starts at 0001 G.M.T., Saturday, 1st December, and ends at 2400 G.M.T., Sunday, 2nd December. The phone section operates similar times, Saturday, 8th December, to Sunday, 9th December, 1951.

A copy has been sent to the QSL Manager in each Division. Long must be a date stamp prior to 1st January, 1952, to be eligible and should be mailed to R.S.G.B. Contents Committee, 28-30 Little Russell St., London, W.C.1.

[Rules of this Contest are substantially the same as those for last year and printed in the November, 1950, issue.—Ed.]

An up to date list of all licenses issued in Southern Rhodesia, together with addresses, has been compiled by the QSL Manager, J. H. Magee, Box 1068, Bulawayo, Southern Rhodesia, and ZS3JJ.

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Transmitters altered for Bush Fire and Fishing Boat Work.

CRYSTALS, as illustrated, 40 or 80 mx., AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.

20 metre Zero Drift, £5 each.

Large, unmounted, 40 or 80 metre, £2 each.

Special and Commercial Crystals—Prices on application. Crystals re-ground, £1 each.

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Phones: M 1475-76-77

JANUARY ISSUE

This time every year a plea is made to Advertisers and Contributors to forward copy early for the January issue.

To explain once again—the printers close down for annual holidays from just before Xmas until the middle of January, it is necessary—if the magazine is to be posted to you on the 1st of January—for the magazine to be printed before Xmas.

Therefore it is requested that material for the January issue must be in the printers' hands by 1st December.

Your co-operation in this matter will be much appreciated.

—Editor.

NEW SOUTH WALES

The monthly general meeting of the N.S.W. Division was held at Science House, Gloucester St., Sydney, on Friday, 20th September, commencing at 7.45 p.m. in the Main Hall. This meeting was a "Back to Methusalem" discourse headed by Joe Reed, 21R, supported by Jack Pike 21E and Harry Stowe 21E. The speaker was gathering food much of interest in the doings of Old Timers as recounted by the "Methusalem" on the platform. The speaker was in Amateur Radio on the part of these gentlemen added up to 150. There were some related facts surprising many. Yams of the times when Amateurs could and did work two-way with battleships, etc. Early types of valves and condenser tubes were shown together with literature and photographs, and many questions were directed to the speakers at the conclusion. It was regretted that owing to unforeseen circumstances the speaker could not attend. A vote of thanks was moved by 2GW.

Other business followed, including considerable discussion on the question of support for the National Field Day which even the Executive has suggested should be discontinued. Progress was reported by the organisers on arrangements for the Woy Field Day. This time there will be two TX's, one for the Widen TX Hunt and there will be an all-band scramble for 30 minutes. The winner will be the station with the largest number of QSO's. New members were admitted, and it was announced with regret that the death had occurred since the last meeting of Percy Feeny VK2HI. It was also announced that Old Timer 2VWK Rev Kennedy is now unfortunately confined to a hospital bed, and that his equipment is to be offered for disposal. The meeting expressed sympathy with relatives of 2HI and expressed hope that 2VWK would soon be restored to health.

EASTERN SUBURBS

Those 40 metre "EB's" who consider that 20 DX isn't possible without a beam of some kind have just resulted in a very good result in recent weeks by 2AYE. With a 40 metre east-west Zepp on 20, he worked 28 countries in 14 days and set the first G-QSO card on 20. He said that Dave had the QSO card on the way almost before the QSO was complete.

An OT who keeps very quiet around these parts is Alan Bourke VK2HI. He has a good Rx in the shack. What about firing up a rig OT? Don't let the old boys go to waste. The station in the Key is in the past of Sydney is 2VA, who has been active with new set-up on 20. Vince found that there were a few snags to overcome at first, but seems to have cleared off the premises. 2AIG has been enjoying his debut on 20 and although he is heard on phone occasionally, most of his work is on the Key. He has been pleased to have 589 reports from G land.

Jack 2E2 seldom misses the DX when he goes out hope it is on the Key. He has been pleased that he is using one of those lesser-known antennae (in this country) described as the WHEAT. During the last week or two, but in 1947, Jack made W.A.C. with it, and moreover much of it is inside the block of flats. The WHEAT is described in the R.S.G.B. Antenna Handbook. The key was used by the antenna of those who must erect antennae in a limited space.

2BC has been working DX on 20 c.w., and also on 40 c.w., working VKIAs. An old 6 metre friend has had his last QSO, Syd Schofield,

ZLICU, at Cape Reinga Lighthouse on the northerly tip of N.Z. North Island had worked many VK2s in this area on 6 metre phone during the last few years. It is reported that ZL that ZLICU passed away recently. It took real enthusiasm to tackle v.h.f. DX from such a lonely spot, but Syd's efforts resulted in many a thrill.

WESTERN SUBURBS

Fred 2ID is on 14 Mc. with ABA after a bad bout of flu. He is hoping, at the return of good conditions on 28 Mc., but in the meantime ropes the Ws in on 14 Mc. Keith 2NJ has been conceding three points to the 20 element beam of Rex 2XH, but still harbours suspicion that Rex has a full gallop or something. Rex 2VG has been a close runner and has been heard rag-chewing with QRP phone.

Frank 2ANC is heard occasionally on 14 Mc. and John 2AGT is becoming involved in beam construction. Harry 2EQ sometimes beams locally as a change from working the DX two at a time. Bob 2QR is heard again after a period of inactivity. Jack 2BK is still quiet after his antenna fell down with the shock of ten new countries last month. Bob 2OA is mildly active, but is to be seen sketching circuits of 2 metre gear (Acknowledgment to 2OA for the foregoing.)

ST. GEORGE ZONE

Speaking to Reg 2RE the other day, he tells me he will be shortly moving his QTH to his week-end at Lake Burri; too much QRM in his part of the district. 2AIM is busy making windows, so that is why we have not heard him lately. The air is still very hot. We have up a three element wide-spaced beam for 20 m.w., let's know how she performs. Robbie. Another we have having a new antenna for 20 m.w. at the brass on 20 m.w. also. Frank 2PT has put up a 50 Mc. bent dipole and he tells us he has been very successful, comparing it with his previous antenna. He is still sending signal from practically zero to strength 8. Let's have some DX reports Frank.

One of these days I hope to get enough time to put up my own antenna. I have been trying to make a start on it for the last twelve months, but something or other crops up; most of the time the weather is too hot. I have a chance to get to work on it very shortly. Don't forget boys, if you hear or know of any items of interest, please let me know. (Phone LW 4277.) I went around to see John 2XW to see if he had any news for me, but he was out. Listening during the month I have not heard any of the local boys, so let's hope conditions are better next month.

NORTHERN SUBURBS

Dave 2DT, Hon. Secretary of this Division, is not on the air often owing to pressure of W.A. business. John 2ANF, Roy 2HO, and Bill 2MQ are all v.h.f. men who are heard on 40 m.w. at times; but 2ANF has had the bad luck to burn out his main transformer. Congrats John on winning the V.H.F. Contest. Harry 2ZAF recently erected a ground plane for 14 Mc. and has had a large measure of success. The guys act as the G-P and the 33 ft vertical is fed with 75 ohm co-ax. Irwin 2AAZ has been active on 20 m.w. and has been calling DX but his 10 ft high antenna is not the best.

Bruce 2FD, Asst. Secretary of this Division, has re-built and re-erected his 100 v.t. on 20 m.w. and it now is rotatable; has had success with 20 watts on 14 Mc. during recent holidays. The 100 v.t. is a 100 v.t. and is a 100 v.t. and it is no improvement. Len 2ADK rarely heard owing to pressure of toil. Bob 2ARL had his element beam at right angles to the main beam using a 3 element job made from brass tube. This zone is sorry to lose Maureen 2AAN from the L. Mt. Macquarie area, he has moved to Eastwood. Bert 2AGW has been for some time in G-land and will be heard from such stations as G8BUU in the near future.

NORTH COAST AND TABLELANDS

'Tis said insurance agents will no longer accept policies on motor vehicles owned or used by Percy Macquarie. Peter 2PA did an excellent job on his Vauxhall for the panel beaters and swelled the pockets of the local car mechanic. He had a little bit of a trip took a trip north in his utility to the VK4 Convention at Somerset Dam; on the way back he ran into a "Pete's" version, another job for the panel beaters. Not to be outdone Doug 2SH decided to wreck his big Hudson. Whilst on the subject of motor vehicles, Rod 2VW has been working on a 20 m.w. sorting water from petrol. Pete 2PA whilst north was working portable and had many good contacts. He has been working on 20 m.w. and is not journeying north as mentioned last month, but spends a lot of time with Audrey?

Roy 2NY is busy fishing, heard now and again on 40. Leith 2EA passing out information on double dipoles, having successful contacts with v.h.f. stations. To inform Ron 2SI, who spent a few days near Urunga. Ron is becoming an expert on chopping wood, if you want any hints, Ron is about on 40 at 7 a.m. A member of the team on the North Coast is Percy Zara, father of the Bellington Ducks. The boys are betting 50 to 1 against a four letter word. Percy Zara's father has been on the sick list, but is round and about once more and has been testing on 144. 2AWS busy getting a TX into operation. Another enthusiast for 144 is Bill 2ZAW and Crieff 2VXO has polished up miles of copper tube ready for the boys to use. The boys are ready to take over a QTH next door to a panel beaters and garage. Alan 2ASO of Kyogle is willing to exchange.

The highest man on the Coast this moment is Jack 2ADN; Jack recently visited Sydney and was successful at an auction sale in purchasing his eyes dream—a 35 mm. movie camera of first quality. Harry 2ARY has back to health again and having the time of his life with 2PA's tape recorder. The North Coast is very active under the 20 m.w. and following grasses just existing. Usually we have more than our fair share—funny world. Last Sunday the 2VW brought a lot of news. It was any other station at more than 100 m.w. It is not often this happens, perhaps an 80 m.b.c. of an evening could be considered when conditions are bad.

HUNTER BRANCH

There was an average attendance of members at the annual meeting held at Newcastle on 14th September, with President 2CS in the chair. Acting on the suggestion of the Divisional Council that our financial year be brought into line with that of parent body, it was decided to elect officers for six months only. Following a suggestion by retiring Treasurer 2AIM, it was unanimously agreed that it would be an advantage to have a Treasurer and Secretary and Treasurer. Officers elected unopposed were: President: Lionel Swain 2CS, Vice-President: Alan Stephenson 2PT, Secretary: Alan Stephenson 2PT. A vote of thanks to the officers of past year was enthusiastically carried.

Prior to general business, the boys were addressed by Major Leach of the C.M.F. who was giving a Divisional report on the Hunter district. The Major emphasised the excellent opportunities open to operators and maintaining a high standard of work and a little yarn of as he described it, was very well received.

Then followed highlight of the evening, a lecture by Alan Stephenson 2PT on "Design and Construction of Transformers as applied to Ham Radio. We were in Alan a very competent lecturer, and he demonstrated in a comprehensive and lucid manner the tremendous advantages a Ham gains in constructing his own gear. We are certain to hear more from Alan and no doubt his next lecture will deal specifically with the subject "Scrounging Iron".

In future the dates and details of Hunter Branch meetings will be published in this column. The next meeting will be on Sunday, 18th November. This is the "Annual Get-Together" for the Hunter Branch and all are invited to meet and meet the boys from the "Big Smoke".

Holidaying at Tamworth, President 2CS visited Syd 2APS. Nice to see 2LV at the annual meeting; Harold has built a new final and

VALE PERCY FEENY VK2HI

It is with deep regret we record the passing on 28th September after a short illness of Percy Feeny VK2HI of Mascot. Active since 1934, Percy's main interest in the hobby was the building of equipment. He delighted in producing all the minor gear used around the shack. Always beautifully constructed, he only did it for his own needs, but would assist those Amateurs in the district who did not have the facilities or ability to do it for themselves. Despite his keenness for building, the operating side was not neglected and VK2HI could be heard on the air from time to time. His main activity centred around 1400 Kc. on c.w. Percy, at the time of his death, was Assistant QSL Bureau for N.S.W. Through the years he assisted in many of the workings of the W.I.A. Little was heard of these efforts but those that knew him well appreciated and enjoyed his efforts in sending out bulletins, building display equipment, sorting cards, etc.

the Central Western Zone. The attendance was the second largest to date, 52 registered. It all started of course the day before when 3HG and family arrived at 3HL's, 3AKF and 3RD and XYL camped at 3AL's, 3ALG, 3RD, 3AF and 3AG. Arrived at 3AL's from Melbourne, 3PF and XYL from Benella, and of course 3AKR from Westerners. Did they want to go to the pictures in town with the Tx and with Neel, the funny noises heard on 80 mx, a good time was had by all. 3HL did not work at all from Monday day, only radio, and with Neel's help, checked over the Tx and the new rhombic.

Sunday, 16th Sept. (Convention Day) turned on ideal weather for the show and after a month's rain. Arrived at 3AL's, 3ALG, 3RD, 3AF, 3AG, 3PF and XYL, and 3AKR, 3RD, 3AF and 3AG, duly labelled, but luncheon was served at 1300, during which our President 3XU welcomed members and visitors. After lunch, 3XU briefed the members on the new Tx, and then, with each with a large scale map of the area. During this episode, 3YW, 3DP and s.w.l. Geoff landed at town with the Tx to Ronald Park, about 3 miles n.w. of Ararat on the Dividing Range. By 1440 the Tx was on the air. About 1530 two and three carloads were sighted driving past on the track. The Tx remained hidden until the end at 1830 when envelopes were opened. The nearest group 3ALG, 3RD, 3AG and Associate had been searching through the grass and scrub about 40 yards away much to our amusement. So the miniature tubes are still waiting for a home.

Back at the Town Hall once more, 3AKR played a number of recordings he had taken of the previous year's convention, and some indeed were surprising. 3ARL put on his quiz competition to test the various grades and a grey man, who had been judged by Geoff 3PD. Shortly afterwards 3ACI carried off the prize for the best piece of home-made equipment, a miniature rhombic shielded loop. 3PD received an indexed note book as his prize, and 3ACI a pair of single blankets.

Tea was served at 1800 hours and we were pleased to welcome 3LF, XYL and family. Mal (a previous zone member) dropped in on his way to the May and June meeting, and then to the business of the annual meeting. 3XU was re-elected President, 3TA Vice-President, 3YW 2nd Secy, 3ALG 3rd Secy and 3ND were elected to the Committee.

During his report the President stressed the need for members to endeavour to make the monthly zone hook-ups which are held on approximately 7150 Kc. 1000 times each Sunday of each month, and the desirability of members to try and enrol new W.I.A. members.

It was decided to hold the three miniature tube tests for the next month, and 3PD made a very generous offer of half a dozen tubes for the best D/F loop on show at the 3AL's and 3ALG. After the tests had been offered, so it looks as if the boys have something to shoot for in the next twelve months.

The next convention will be held at Horsham during September, 1932. Further details later. It will undoubtedly be of interest to Hams and non-hams alike. It is particularly true that 3TA has permission to play back recordings of Amateur transmissions if requested. Byron can't wait to play back the recording of the annual meeting. 3TA showed three talkie films covering subjects of general and technical interest. The first was a beautiful outfit, the excellence of the reproduction. The convention concluded about 2200 hours with a vote of thanks by 3PD for the pleasant and happy day.

NORTH EASTERN ZONE

Last month has been most devoid of news, haven't even been able to savor any of the boys have not been on. Heard John 3AK calling CQ but John gave up in disgust. Zone hook-up didn't bring anything to light either. Listened to Eastern Zone to get some information. Looks like Peter 3JZ will be in our zone when he is home and in the Eastern Zone when the work of 3TS should be married as I have a new QTH about finished. 3GD calling a v.i.f.o. CQ just off zone frequency. Get a v.i.f.o. George and join the boys.

3UI experimenting successfully with a portable v.h.f. rig for 6 and 2 mx which is a partially hand-switched job. Feversh activity around the place demonstrates the progress of the v.h.f. field days. 6 and 2 mx work sound and are in readiness to journey to Mt. Major. 3ACI winding deflector and focusing coils for a 12 in. c.r.o. Stan also looking for a spot tube. Have one Stan, doubtless there will be others. 3CI's XYL and harmonia are down with the flu. 3AL is starting a new series of articles of writing in the Wangaratta Hospital. Cheers from the boys Howard.

V.h.f. field day was quite a success, judging from the number of boys who attended. Completion. 3UI and partner (Ken), and yours truly were there plus 3KR, XYL and harmonia.

Quite a few stations heard by both 3UI and 3CT but I seem to see the city boys prefer their own clique and wouldn't look further than their noses. 3KR nearly converted to a v.h.f. man and if you and Jack 3PF can get him again the idea I am sure that then will be an interested partner. 3ACW still working hard on 20 mx while Andy 3FD is actually enquiring about the possibility of a new Tx. Doug Twigg, of Avenel, has been busy gathering parts for Tx while Mr. Brown, of Yea, has been conspicuous by his silence for the past few months.

SOUTH WESTERN ZONE

Haven't heard anything of the Warramboul boys this month, certainly hope they had a Convention details are well under way. 3HG active this month on both 80 and 20 mx, working plenty of European DX on 20; Neel has the 20 a.c. operated now, and the 80 a.c. is a whole rig a.c. operated now. 3IL has been heard occasionally but not overmuch. We will all be looking forward to working you when you get the new Tx going Leigh. 3ADN still manages to come on about once a month. Pat told me the other night, during one of these monthly appearances, that he had been bothered with little mines, where he has been continually digging his Land Rover out of.

3AGD very quiet this month, but Amateur Radio is concerned at least. I guess when some of the seasoned work is completed we'll hear John 3AGD on the air again. Nothing heard of 3JA for quite a while. 3AGV still (as ever) has his regular studs with 2SS. Gordon has also been bitten by the v.h.f. bug and is alternating his night and day work gear. 3AKR not quite as active as usual, having a multitude of troubles with the rig, right from the i.f. to the modulator.

3BW heard quite a lot on 40 since he got his new rig working. 3AKE doing quite well with his portable rig. 3IM and 3BU had 14 contacts on 144 the other week and 3BU was heard in Melbourne 39 on 576 Mc. 3TV using his AT5 again, has got himself a new AR1 Rx. 3AGN hopes to give quiet the night MC sets occasionally. 3ALG having a few contacts with his antenna 10 ft off the ground at one end; hasn't got a 2000 Mc. yet. 3AJT still working plenty of DX on 20 mx. 3AOL has re-wrapped his Rx, going pretty good now.

GEELONG AMATEUR RADIO CLUB

Members of the club paid a visit to the F.M. Station at Jolimont and were shown around by Mr. Norman. No member was at all keen to go up the mast. On 30th September the club conducted a hidden Tx hunt. The Tx was hidden by Dick 3ABK and Peter Cartwright. The location was 16 miles from Russell's Bridge. Ed 3AKE was doing fine when his Rx broke down. 3SY and 3ALG, only five minutes behind, were in the lead and located the hidden Tx. Five boys took the prize and they travelled 100 miles for the day. On the way back, the Tx was again hidden and was again first by 3SY and 3ALG, with 3BU 2nd.

On 28th September, the club was visited by the Moorabbin boys. Brian Lloyd 3AOL gave a talk on Transformer Modulating, after which a "chin wag" followed over coffee and biscuits. The Geelong gang will pay a visit to the Moorabbin Club in 1932. Peter Perkins was very keen in obtaining his pocket watch to use on the air as soon as his call comes through.

EASTERN ZONE

The September meeting of the Sale sub-branch was held at Balnradale and was a very good show. Sixteen members were present, which was pretty good, considering that the

Sale and Maffra crew travelled 45 miles to be present. Main feature was the film show of various subjects, including one on the subject of radio landing aids, a service film provided by 3ABP. An excellent supper rounded off the evening.

3ANC has been appointed manager of the Traralgon butter factory; any chance of a free issue North of the line, but I don't know when he goes away for the week-end, some dirty dog pinches one of his chooks. The villain does look like a home-bred one, but I don't know. 3PR is back on the air from his new house in Leongatha. 3AD in strife with b.c.i. when operating on 30 Kc. 3VL/US are active on 50 Mc., no antenna for low frequency as yet. We welcome 3JZ to the zone, Peter is kid-whackin' at Yarram and expects to be on 80 soon. My friend Leo 3DZ is working on 20 and 40, and last, 3SS, 3SS still building a freq. meter. 3LV is a regular on 3550 Kc. on Sunday evenings. 3BZ and 3AP apparently gone into the smoke, 3ALA building his h.s. modulator at last. At least he wandered into 3SS' domain, purchased two resistors and departed, so he must be building G.D.I.

3TH's father received a broken shoulder in a car accident in September which prevented the attendance. The committee of the zone recently announced his engagement to a lucky lady named Charmaine. 3SS, 3QZ and 3PR represented the zone at the State Convention, for the low-down on the results and lack of a quorum. This shows a deplorable lack of interest by the city types and here are two questions for the zone to consider at the Convention in the country—Eastern Zone for example. We have no trouble getting 20 members to branch meetings in Maffra and would certainly have a quorum! Secondly, I suggest having a disposals handout in conjunction with the State Convention! Now, go and make building G.D.I.

Martin 3AMV has the Zone Convention arrangements well in hand and as a special treat will be allowed to excavate his own (private) the Eastern Zone's latest acquisition, the "Kinneer Trophy." We expect a good muster as Warragul is close to Melbourne and distance is not an excuse for non-attendance.

That's the lot for now, and I hope to see you all at Warragul on 3rd November.

FAR NORTH WESTERN ZONE

Charles 3TI attended the State Convention in Melbourne and returned with pieces of 300 and 400 Mc. antenna cable, and a new 100 Mc. gear generally. From all accounts, although there were very few at the Convention, quite a few points were discussed. A meeting of members will be held in the near future to receive Charles' report of happenings. Charles is still managing to keep on the air and has been successful in getting the 300 Mc. 3WI and passes on any news. Noel 3AUG still on 20 mx frantically turning the beam by hand and chasing and chasing the DX. Understand that he only requires Europe for W.A.C. The Ouyen gang very quiet, although we are expecting big things from them when the a.c. power is finally connected to the town. Frank 3FC drags the old Type 3 out and dusts it occasionally and is just waiting for the big day when the a.c. is switched on. Understand there is an 8SR and Q5R to be attached to Rx.

Fred 3ACF very quiet and gather he has been working on a new 200 Mc. gear of his own supply. Harry 3MF unable to find corner in the house to set up his gear. With the approach of summer there is some talk about the v.h.f. field days. I don't know if there is any possibility of some work being done on them this year. Max 3GZ still operating the TA12D with the modulating the 200 Mc. gear. I expect to increase the drive on 20 mx. Jeff 2AHM, of Willow Point, has been missing from the band for a few week-ends. Chas worked him recently and he has been back, but he had been on the road to recovery and hopes to be in Mil-dura shortly. Had a visit from VK300 last month, but he had long rag chews with some of the gang.

QUEENSLAND

It is of course well known by all Queenslanders that a get-together at Somerset Dam was a success. The weather was perfect, which was a huge success for an initial meeting. The next one, which is to be held on 10th October, will be a very big one. Coinciding with the usual field day contest, should be an enjoyable week-end. Accommodation has been provided for the night of the week-end. I don't know if there is any possibility of some work being done on them this year. Max 3GZ still operating the TA12D with the modulating the 200 Mc. gear. I expect to increase the drive on 20 mx. Jeff 2AHM, of Willow Point, has been missing from the band for a few week-ends. Chas worked him recently and he has been back, but he had been on the road to recovery and hopes to be in Mil-dura shortly. Had a visit from VK300 last month, but he had long rag chews with some of the gang.

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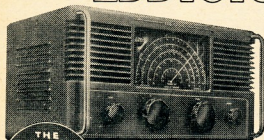
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committee to make arrangements for the next "Do." (Rev. Delbridge) is back on the air after having the first trial run. Many of you probably worked "Del" when he was first on the air way back in 1927—nice to see you again. I hope to see you having receiver trouble though.

Clare has written to me to apologise for the field notes that he has sent me. He has been Dad (KNC) has also been Rx trouble. After much scratching of brains, three valves were found to have passed away. Sorry to hear that I was a little bit of a nuisance. I suppose the fact of the matter is that you burnt them out when you were tuning up the beam that I was using. I hope you have got the same way as all those pea-lanes, i.e. forever!

Another man who will be burning up pea-lanes is Leslie Lee. He has got his ticket for about four weeks. Yes, he already has a three element rotary beam; personally I helped him to push the tower up with the help of about four others, so you can see that there is not much to raising towers—provided you have a tower.

4VJ 4WJ and AMD have been inactive—on 20 mx anyhow. I wonder what they are cooking up for the Contest?

We are waiting to hear of the death of Bill Argate (4KH) who would have been known to many of you old-timers. I have never heard of him for a year or more including one of the latest magnetic tape recordings. I have never heard anything so delightful as Bill's voice. I hope he is still alive. I am sure you that if your phone is all distorted when played back to you by Noel, it is in even bet that it is distorted before it gets to the recorder. Noel is a very good fellow to use with his Rx in the shack I know. His services will be very much in demand. Cheerio and thanks for your contribution. Sorry no notes from zone correspondents.

SOUTH AUSTRALIA

The monthly general meeting of the VKS Division was held at the club rooms in Wymondley on the 11th inst. A large number of members and visitors, and opportunity was taken to welcome Squadron Leader R. Walker (4VJ) who was visiting. He was accompanied by his wife and daughter. He presented to attend the meeting and address members as to how the Radio Amateur could be best served. He also spoke on the subject of the Reserve. He said that the idea of the Wireless Reserve had gone by the board in these days of competition for training. He also gave a description of the many aspects of Radio as applied to the R.A.A.F., nobody present could but agree with this decision. The suggested alterations to the R.A.A.F. were discussed and although both officers were more than helpful, the members showed a deal of interest in the proposition. Personally I felt that it was the old idea of the Wireless Reserve that appealed to most of those present, and whilst a feeling of disappointment pervaded the meeting that this would not be possible, all present quite realised that under the circumstances this was not at all feasible.

Active participation in the R.A.A.F. Reserve is a question for the individual and the individual alone, and I am sure that it is with regret that the members realised that the old order of Wireless Reserve with its co-operation and W.I.A. backing, must give way to individual effort and professional service. My co-member of the journey, Fred, who was present, expressed the vote of thanks in his usual polished manner and the enthusiasm with which it was received indicated only too well how successful the evening had been. The items which were screened were very well received, specially the one concerning the American B36, and of course the old favorite, "Frequency Hopping". It came in for its usual well merited applause. Altogether it was a very good evening, and although the attendance was not large, all persons to be exact, I think that the number present surprised quite a few. SXU was the special project for the night. By the look on his face early in the evening, I gathered the impression that he was having difficulty in making the band or something. It turned out that no ergs could be found in the power point, and after putting on his duck shooting cap and attacking the matter with his usual missing ergs were discovered. Good work. "Aired" The hour being fairly late, the President BMD and I went to the club to get the loko with the gavel and announced that unless there were items of general business needing urgent attention, the meeting would close until the next meeting, and that is where it stands for the present.

Among the visitors were Les Sux, Hughie 3BC, and W. J. C. and last but not least Charlie SWV. Roy 5AC was a very old member

to be present (don't often see you these days Roy) and our youngest Associate member, Kevin John Robson (13 years), also was well

Associate members' representative, Jim Paris, hit the headlines in the local radio paper recently by being to the VKS Division to hear the Iceland short wave station TFJ. Jim tells me that he could not understand much of the talk, but he said the announcer was walking in Icelandic, but he thought that it was very cold there, but he thought the announcer's teeth were chattering and there were frequent references to being long-haired and hairy animals. Nice work Jim, and talking of ice, how is the supply of icing sugar?

One of my Ham friends said to me the other day, "that trip that you wrote for the magazine isn't bad, but you always seem to write about the same people." I agreed with him and pointed out that I was a writer for this magazine as I was only able to write about the people in my immediate circle, and naturally coming to the VKS Division to hear that were outside my ken. I suggested that if he and some others were to jot down a few paragraphs and send them to me I would be more than glad to publish them. He said, "I am too busy to do that," and then as an afterthought, "why don't you spend a few hours listening to it, you would pick up quite a lot of news." He seemed to be somewhat dubious when I suggested that possibly I might be a little busy too. Wouldn't it?

Les SUX had a transformer made recently for his new Rx, the idea being that he could break down the 240v to 210v, and he would be lovely. The idea did not work out as well as was expected, much to his mystification, and all and sundry were intrigued as to why. When the receiver was removed from its case for checking, it was noticed that the filaments of the tubes all appeared to be burning at half brightness and to the eternal degradation of "Uncle Xray," another transformer was found in the Rx chassis for the express purpose that the new one was procured. As I have often said, wouldn't it!

5CH is busy engaged in building a xtal controlled 2 mx TX and at the moment has mentioned that the power supply for the three m.c.w. copy can only assume that the supply of water is now well under control. Nearly time you said another Claude. STW has been on holidays and therefore there is nothing to report concerning Tom's radio activities. I was looking for the conclusion of the meeting OM, but "Doc" told me that you had gone earlier. 5JA is back from his holiday and will resume his monthly work out of his gear. John brought back with him a television Rx which he was using in the old country, although when an image will appear on the screen will remain a muddle. Claude STW has a 40 ft. pole for his beam, but as yet Kex shows no sign of erecting anything on top of the pole. I was a bit busy up OM, because before long the gliding weather will be here and then beams will have to take a back seat. SFD has a recording permit these days and that is keeping John busy, although he has been heard on 40 mx occasionally. EMS is still working a few on 20 mx, but Stuart is at present mourning the passing of his power tranny belonging to his 2 mx gear. Hate off piece gentlemen, 5CJ has been heard sometimes on 40 and 20 mx, and all being well.

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Colin should meet the city boys at the October meeting as he will be down in the big city on his annual holidays. Hope that I see you again in the big city. I am sure that at the moment of writing confined to hospital, no details to hand as yet, but we all hope that Henry will be able to recover his health.

It is not often that I can be accused of being over modest, but after reading the closing paragraphs of the VKI Northern Zone scribe, I feel that I am a little bit of a nuisance. The two best broadcasting stations in Australia indeed, Mr. Cullinan! Might I point out to you that over 3000 people in the room to receive the signal because I had the temerity to allude to 5DN as being the best broadcasting station in the world. I am sure that you will be thundering with me. I also double it in spaces. Tut, tut.

The news from the Upper Murray boys this month begins on a not-too-happy a note because of the fact that the signal has been a little polo and all hope that it will not be long before Harry's signal will be heard on 40 mx again. It was intended to forward the Type 3 Mark II, belonging to the VKI Division up to Harry for his bedside use, but as news reached here this week that he was on the way home, I decided to postpone this matter as he has been shelved for the present. Incidentally, I was surprised to find out that a number of our members had been to the VKI Division to see a Type 3 Mark II, for the use of any member confined to bed through illness. We should get a publicity office I think. What am I saying!

5BC has returned from his annual vacation full of the perfect air conditions existing at the VKI Division. I am sure that he will be No noise level to contend with and consequently Hughie's simple portable set-up performed very well. I am sure that he will be able to maintain that he has a two stage amplifier just behind his inner ear.

SMA has been a little restricted in his radio activities this month because of the fact that his XYL has been on the sick list, and Fred has been head nurse, cook, and housemaid. His wife has been very busy, but I am sure that he has been in a new idea for m.c.w. and if all can be believed, an article on this project will give you a good idea of the work that he can give you. I am sure that you will get it printed. Fred, a couple of pounds of butter, or a case of oranges to the Editor will go a long way, but I am sure that you will get it printed. Your blood pressure Tom?

5CF is going about the place with visions of a new transmitter in his mind. He has been getting along with a simple converter into the b.c. Rx, but the pressure of the winter has been too much for him when she wants to listen to the latest "soap opera" has proved too much, and the necessary steps to get the converter working have been too much for him. I am sure that you will get it printed. Two words. "The new baby." Laurie sent me the local news this month, and believe it or not, the news occupied one page, and the next twenty pages contained a slight description of the aforesaid baby. Laurie, isn't it wonderful how nature compensates for the imperfections of the parents, ho, ho, ho.

DARWIN AREA

On 1st September, a public Show was held in Darwin and a busy day. The show was attended by the greater part of Darwin's 60,000 population. The W.I.A. was represented by a stand which was erected in the main arena. An oscilloscope and microphone entertained many children and their parents. An electronic key threw a challenge to many a good R.G.G. key operator.

Special mention must be given to our friend Max Mander who, with his tape recorder, entertained children and parents alike throughout the day and evening. Special mention also to VKS SWV, 5CV, 5AS, 5CN, 5AS, 5TF and Terry 5CN. I am sure that you will get it printed. Keith Halmer and Ces Davis. We hope the latter members will have their call signs soon.

WESTERN AUSTRALIA

BY L. G. WILSON, VK4G

What again? Well, the pleasure was to get rid of my boys is to enlist an official scribe. To save the W.A. Division the trouble of inserting a notice in this magazine I think I had better state the case. I am not a member of the W.I.A., W.A. Div.

What the heck is the good of trying to tell the Violet bunch that they are not in the bands, I reckon they could quite easily find out for themselves by the application of a few pennorth of wire to the receiver.

However, the 7 Mc. band, down this way, still seems to survive the influx of strangers and a

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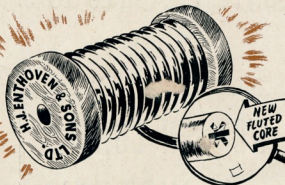
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11	116	2.444	27.4	28.5	30.4	32.1	33.7	35.3	36.8	38.4	39.9	41.4	42.9
12	104	2.440	34.3	35.1	36.5	37.9	39.3	40.7	42.1	43.5	44.9	46.3	47.7
13	92	2.137	44.4	45.1	46.5	47.9	49.3	50.7	52.1	53.5	54.9	56.3	57.7
14	80	2.012	58.0	59.5	60.9	62.3	63.7	65.1	66.5	67.9	69.3	70.7	72.1
15	67	1.875	71.5	72.9	74.3	75.7	77.1	78.5	79.9	81.3	82.7	84.1	85.5
16	54	1.624	90.5	92.0	93.4	94.8	96.2	97.6	99.0	100.4	101.8	103.2	104.6
17	46	1.432	118.0	119.0	120.0	121.0	122.0	123.0	124.0	125.0	126.0	127.0	128.0
18	40	1.219	141.0	142.0	143.0	144.0	145.0	146.0	147.0	148.0	149.0	150.0	151.0
19	36	1.054	161.0	162.0	163.0	164.0	165.0	166.0	167.0	168.0	169.0	170.0	171.0
20	32	0.914	186.0	187.0	188.0	189.0	190.0	191.0	192.0	193.0	194.0	195.0	196.0
21	28	0.812	262.0	263.0	264.0	265.0	266.0	267.0	268.0	269.0	270.0	271.0	272.0
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